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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,190	09/08/2003	Nobuhiro Miki	21776-00042-US	8417
30678 7590 12/28/2007 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20036			EXAMINER MARKOFF, ALEXANDER	
			ART UNIT 1792	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/656,190	MIKI ET AL.	
	Examiner	Art Unit	
	Alexander Markoff	1792	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,8,10-13,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) 1-5,8,10 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-13 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/10/07 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11-13 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11-13 recite the use of a steam introduction valve and a steam spraying nozzle to bring the steam into contact with a surface and to spray the steam onto the surface, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass by recitation of "using" the recited parts. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 11-13 and 20 recite the use of to purify the surface, but, since the claim does not set forth any steps involved in the method/process, it is unclear what

method/process applicant is intending to encompass by recitation of "using" the recited parts. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 11-13, 18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kunze-Concewitz (WO 96/10463, U.S. 5,964,952).

U.S. 5,964,952 to Kunze-Concewitz is taken as an equivalent to WO 96/10463, which is published in German on April 11, 1996. Kunze-Concewitz discloses a surface purification method used in manufacturing semiconductor or LCD devices. The method of Kunze-Concewitz comprises generating a wet steam having liquid droplets (reads on "mist containing steam", as instantly claimed), bringing the wet steam into contact with the surface of the device by spraying, thus purifying the surface of the device (see entire document, especially col.4, line 28; col. 5, lines 15-27, Figures 1 and 3-11). With regard to claim 13 Kunze-Concewitz teaches the processing temperature in the range from 100°C to 200°C (col.5, lines 40-42).

With regard to claim 20, Kunze-Concewitz teaches the use of steam valve 4 for introducing a wet steam into the chamber by spraying onto the surface through a steam spraying nozzle 1 (col.4, lines 26- 29, col. 5, lines 15-27 and Figures 1 and 8-11).

Therefore, all the processing steps as instantly claimed are met by Kunze-Concewitz.

### ***Response to Arguments***

6. Applicant's arguments filed 10/10/07 have been fully considered but they are not persuasive.

The applicants again argue that the applied prior art does not teach two different steam processing steps.

This is not persuasive:

The claims require bringing the mist containing saturated steam into contact with a surface of the substrate by using a steam introduction valve ( or introducing the referenced steam into a processing chamber with an introduction valve).

Such is disclosed by Kunze-Concewitz. The steam is delivered to the substrate (chamber) through valve (4).

The claims further require spraying the referenced steam onto the substrate by using (through) a spraying nozzle.

Such is also disclosed by Kunze-Concewitz. The steam is sprayed onto the substrate through nozzle(s) (1, 37).

Whether or not the method described with respect to Figure 1 in the instant application is different from what is disclosed by Kunze-Concewitz, the limitations of the

instant claims are disclosed by Kunze-Concewitz and thereby the instant claims are anticipated by the teaching of the applied document.

The applicants further allege that Kunze-Concewitz does not disclose the purification effect of the claimed steps.

This is not persuasive:

First, the claims are silent regarding any argued purification effect.

Second, the claimed steps are disclosed by the applied document.

Third, in contrast to the applicant's arguments Kunze-Concewitz teaches purification effects as argued at least at column 5, lines 15-27.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6,178,973, 6,508,258, 6,601,594 are cited to show the state of the prior art with respect to steam cleaning methods.

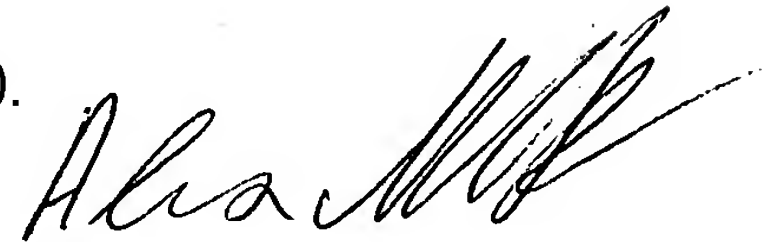
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Markoff  
Primary Examiner  
Art Unit 1792

AM

ALEXANDER MARKOFF  
PRIMARY EXAMINER